

WHAT IS CLAIMED IS:

1. An image processing apparatus comprising:

a color converting section that converts three
primary colors of colors supplied for each pixel of
a manuscript image into plural types of color data
related to a complementary color;

a region identifying section that identifies a
region for each pixel based on the three primary colors
of the colors supplied for each pixel of the manuscript
image;

a setting section that sets a value of sharpness
setting;

a storage section that stores a filter coefficient
that consists of a basic coefficient and a differential
coefficient for each value of sharpness setting;

a generating section that reads out from the
storage section the filter coefficient based on the
value of the setting caused by the setting section, and
generates plural types of matrix shaped filters, each
of which corresponds to an area identified by the
region identifying section according to the read out
filter coefficient;

a selecting section that selects one of the plural
types of matrix shaped filters generated by the
generating section according to the identification
result from the region identifying section; and

a filter section that subjects color data acquired

from the color converting section to a filtering process by using the matrix shaped filter selected by the selecting section.

2. An image processing apparatus according to
5 claim 1, wherein three primary colors of the color is red (R), green (G), and blue (B), and plural types of color data are cyan (C), magenta (M), yellow (Y), and black (K).

3. An image processing apparatus according to
10 claim 1, wherein a filter coefficient stored in the storage section is configured in size that corresponds to 1/4 of the filter size.

4. An image processing method of such type comprises the steps of:

15 converting three primary colors of colors supplied for each pixel of a manuscript image into plural types of color data related to a complementary color;

identifying a region for each pixel based on the three primary colors of the colors supplied for each
20 pixel of the manuscript image;

reading out the filter coefficient based on the value of sharpness setting based on the filter coefficient that consists of a basic coefficient and differential coefficient for each value of sharpness
25 setting stored in the storage section; and

generating plural types of matrix shaped filters, each of which corresponds to the region identified

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according to the read out filter coefficient;

selecting one of the plural types of matrix shaped filters generated according to the identification result of the region; and

5 subjecting color data acquired from the color converting section to a filtering process by using the matrix shaped filter selected.

10 5. An image processing method according to claim 4, wherein three primary colors of the color is red (R), green (G), and blue (B), and plural types of color data are cyan (C), magenta (M), yellow (Y), and black (K).

15 6. An image processing method according to claim 4, wherein a filter coefficient stored in the storage section is configured in size that corresponds to 1/4 of the filter size.

7. An image forming apparatus comprising:

20 image readout means for reading three primary colors of colors for each pixel of a manuscript image; a color converting section that converts the three primary colors of colors read out by the image readout means into plural types of color data related to complementary colors;

25 a region identifying section that identifies a region of each pixel based on the three primary colors of the colors supplied for each pixel of the manuscript image;

a setting section that sets a value of sharpness setting;

a storage section that stores a filter coefficient that consists of a basic coefficient and a differential coefficient for each value of sharpness setting;

a generating section that reads out from the storage section a filter coefficient based on the value of setting caused by the setting section, and generates plural types of matrix shaped filters that corresponds to a region identified by the region identifying section according to the read out filter coefficient;

a selecting section that selects one of plural types of matrix shaped filters generated by the generating section according to the identification result from the region identifying section;

a filter section that subjects color data acquired from the color converting section to a filtering process by using the matrix shaped filter selected by the selecting section; and

image forming means for forming an image on an image forming medium based on color data outputted from the filter section.

8. An image forming apparatus according to claim 7, wherein three primary colors of the color is red (R), green (G), and blue (B), and plural types of color data are cyan (C), magenta (M), yellow (Y), and black (K).

9. An image forming apparatus according to claim 7, wherein a filter coefficient stored in the storage section is configured in size that corresponds to 1/4 of the filter size.

5 10. An image processing apparatus comprising:

 a converting section that converts each input pixels of two-dimensional images in a main scanning direction and a sub-scanning direction each into an image density signal;

10 an identifying section that identifies a character region or a photograph region and the like based on an image density signal in units of target pixels from this converting section;

 a setting section that sets a sharpness level;

15 a storage section that stores a filter coefficient that consists of a basic coefficient and a differential coefficient for each level of the sharpness;

 a generating section that reads out from the storage section the filter coefficient based on the value of setting caused by the setting section, and generates plural types of matrix shaped filters that correspond to the identification results obtained by the identifying section for said each read out filter coefficient;

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25 a selecting section that selects one of plural types of matrix shaped filters generated by the generating section according to the identification

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results from the identifying section; and

a correcting section that corrects an image density signal from the converting section by using a filter value in the corresponding coordinate system of the filter selected by the selecting section.

11. An image processing apparatus comprising:

plural converting sections that convert each input pixels of two-dimensional images in a main scanning direction and a sub-scanning direction each into an image density signal of a respective one of a variety of colors;

an identifying section that identifies a character region or a photograph region and the like based on an image density signal in units of these target pixels from these converting sections;

a setting section that sets a sharpness level;

a storage section that stores a filter coefficient that consists of a basic coefficient and a differential coefficient for each level of the sharpness;

plural generating sections that read out from the storage section the filter coefficient based on the value of setting caused by the setting section, and generate plural types of matrix shaped filters that correspond to the identification results obtained by the identifying section by a respective one of a variety of colors according to this readout filter coefficient;

